

## On the *charitonovi* species group of the spider genus *Coelotes* (Araneae: Amaurobiidae)

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**Abstract.** Eight spider species of the genus *Coelotes* from Central Asia and the Near East currently assigned to the *charitonovi* species group are described. Four species, *Coelotes charitonovi* Spassky 1939, *C. juglandicola* Ovtchinnikov 1984, *C. nenilini* Ovtchinnikov 1999, and *C. turkestanicus* Ovtchinnikov 1999 are previously known from both sexes, and four others, *C. caudatus* de Blauwe 1973, *C. arganoi* Brignoli 1978, *C. coenobita* Brignoli 1978, and *C. vignai* Brignoli 1978 are known only from females. The dorsal views of the epigynum of *C. juglandicola*, *C. caudatus*, and *C. vignai* are illustrated and described for the first time.

**Keywords:** Central Asia, Near East, *Coelotinae*, epigynum, taxonomy

Spassky (1939) described *Coelotes charitonovi* Spassky 1939 from Uzbekistan based only on females. The “group” remained untouched until Charitonov (1969) described *Agelena bucharensis* Charitonov 1969 based only on a male, which has proven to be a junior synonym of *C. charitonovi* (Ovtsharenko & Fet 1980; Ovtchinnikov 1988, 1999). *Coelotes charitonovi* is widespread in Central Asia (Turkmenistan, Uzbekistan, Tajikistan, and Kyrgyzstan) (Ovtchinnikov 1999). de Blauwe (1973) described *C. caudatus* de Blauwe 1973 from Lebanon and Brignoli (1978a) described *C. arganoi* Brignoli 1978, *C. coenobita* Brignoli 1978, and *C. vignai* Brignoli 1978 from Turkey, all based on females. *Coelotes caudatus* is the only coelotine known from the Near East. Although Brignoli (1978b) examined more specimens of *C. caudatus* from this region (2♀ from Col des Cedres; 3♀ from Cedres de Beharre, and 1♀ from Baskinta), the presence of coelotines in the Near East has not been verified by recent collections, and its occurrence in Lebanon needs confirmation. Ovtchinnikov (1984) described another species, *C. juglandicola* Ovtchinnikov 1984 from Kyrgyzstan, based on specimens of both sexes; spermathecal morphology, however, was neither illustrated nor described. Ovtchinnikov (1999) described two additional species—*C. nenilini* Ovtchinnikov 1999 from Uzbekistan and *C. turkestanicus* Ovtchinnikov 1999 from Uzbekistan, Kyrgyzstan, and Kazakhstan and placed them in the subgenus *Brignoliolus*, together with *C. charitonovi*, *C. caudatus*, and *C. vignai*. Wang (2002) included the species listed above, together with *C. arganoi* and *C. coenobita*, in the *charitonovi* species-group of *Coelotes* based on the anterior, closely-set epigynal teeth, but males were needed in order to support this placement. *Coelotes turkestanicus* was also recorded from the Orenburg Region of Russia, the northernmost limit of its range (Esyunin et al. 2007).

The phylogenetic relationships of the *charitonovi* group species with other coelotines are still unknown. They could be closely related to the *atropos* species group from Europe and Middle Asia in sharing a broad patellar apophysis, a reduced lateral tibial apophysis, a short cymbial furrow, a rounded median apophysis, and a prolaterally originating embolus, but the *charitonovi* group contains species with the patellar apophysis strongly modified and the epigynal teeth distinctly long and closely set.

Within the *charitonovi* group, the species are geographically distinctly separated. The four species from eastern Central

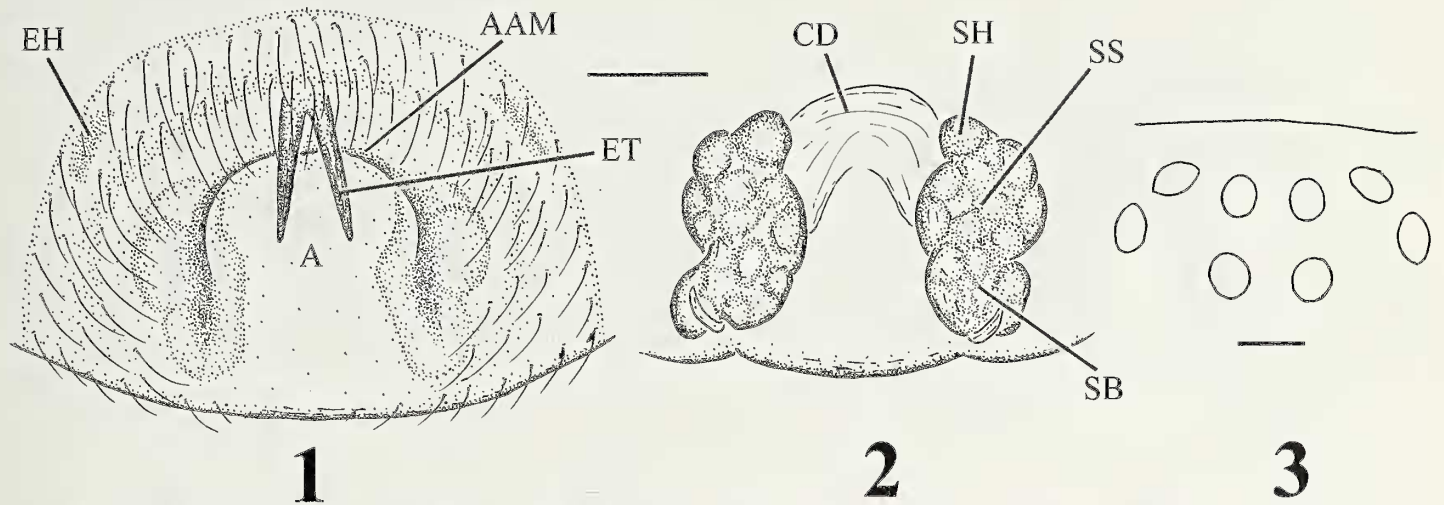
Asia (*C. charitonovi*, *C. juglandicola*, *C. nenilini*, *C. turkestanicus*) might be closely related in sharing the atrium that is situated anteriorly at level of epigynal hoods or anterior epigynal hoods, the elongated spermathecae, and other similarities in the male palp. Unfortunately, data from males were not available for the other four species from western Central Asia and Near East. Their females share the medially or posteriorly situated atrium, the long epigynal teeth, and the more or less broad spermathecae.

In this paper, all species of the *charitonovi* group are re-described and a key is provided to the species, with particular focus on the genitalic structures. The dorsal views of the epigynum of *C. juglandicola*, *C. caudatus*, and *C. vignai* are illustrated and described for the first time. *Coelotes nenilini*, of which specimens are not available, is described based on the illustrations of Ovtchinnikov (1999).

### METHODS

All measurements are in millimeters. Scale lines are 0.2 mm. Terminology used in the text and figures follows Wang (2002). The distribution map was generated using GIS ArcView software, and the specimen files of the species studied can be downloaded from Wang (2009). Due to the limitation of available specimens from this region, this study is based mainly on the examination of type specimens, which were loaned from the following museums: AMNH = American Museum of Natural History, New York (N.I. Platnick); MHNG = Muséum d'histoire naturelle de Genève, Switzerland (B. Hauser); MNHN = Muséum National d'Histoire Naturelle, Paris (C. Rollard).

Abbreviations used in the text are: AAM—anterior atrial margin; AME—anterior median eyes; ALE—anterior lateral eyes; AS—atrial septum; C—conductor; CD—copulatory duct; CDA—conductor dorsal apophysis; CL—conductor basal lamella; CY—cymbial furrow; E—embolus; EB—embolic base; EH—epigynal hood; ET—epigynal tooth; FD—fertilization duct; LAM—lateral atrial margin; LTA—lateral tibial apophysis; MA—median apophysis; PA—patellar apophysis; PAM—posterior atrial margin; PLE—posterior lateral eyes; PME—posterior median eyes; RTA—retrolateral tibial apophysis; S—spermathecae; SB—spermathecal base; SS—spermathecal stalk; SH—spermathecal head; ST—subtegulum; T—tegulum; TS—tegular sclerite.



Figures 1–3.—*Coelotes arganoi* Brignoli 1978, female holotype from Erzincan, Sakaltutan gecidi, Turkey. 1. Epigynum, ventral view. 2. Epigynum, dorsal view. 3. Eyes, view between front and dorsal.

SYSTEMATICS

Family Amaurobiidae Thorell 1870

Subfamily Coelotinae F.O. Pickard-Cambridge 1893

Genus *Coelotes* Blackwall 1841

The *charitonovi* Group

**Diagnosis.**—Females with anteriorly situated, closely set epigynal teeth; males with strongly modified, broad patellar apophysis, reduced lateral tibial apophysis, short conductor,

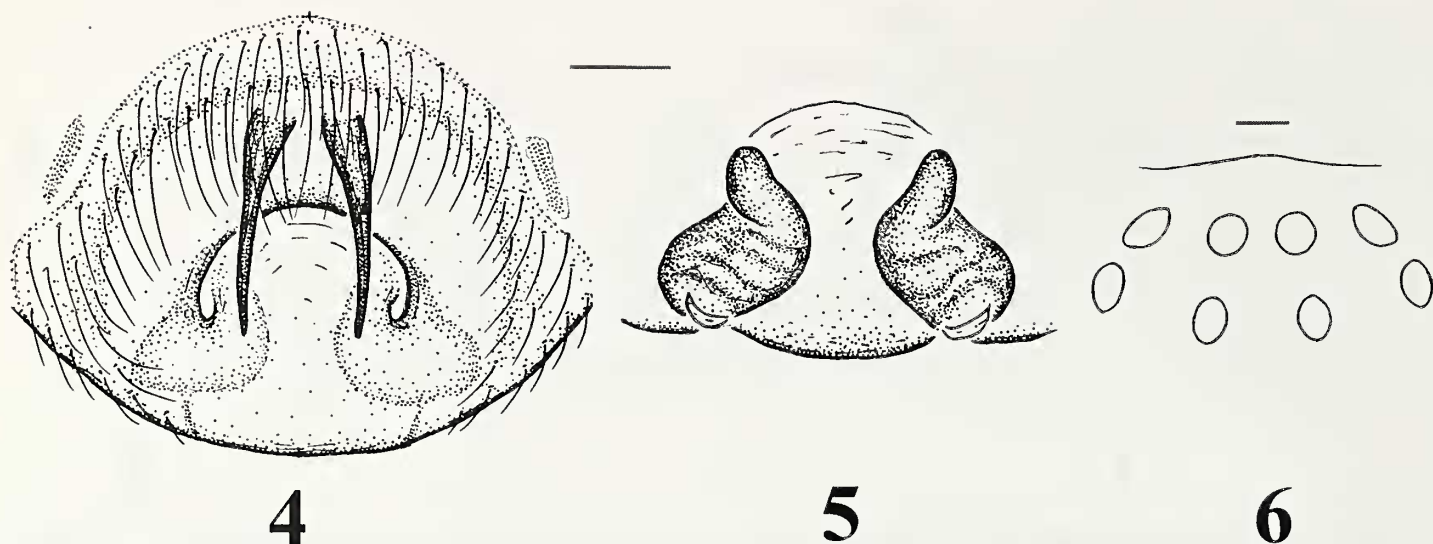
round, spoon-shaped median apophysis, and prolaterally originating embolus.

**Distribution.**—Central Asia (Turkey, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, Uzbekistan), Near East (Lebanon), Russia (Orenburg Region) (Fig. 37).

**Composition.**—Eight species: *Coelotes arganoi* Brignoli 1978; *C. caudatus* de Blauwe 1973; *C. charitonovi* Spassky 1939; *C. coenobita* Brignoli 1978; *C. juglandicola* Ovtchinnikov 1984; *C. nenilini* Ovtchinnikov 1999; *C. turkestanicus* Ovtchinnikov 1999; *C. vignai* Brignoli 1978.

KEY TO SPECIES OF THE *CHARITONOVII* GROUP

1. Male (those of *C. caudatus*, *C. arganoi*, *C. coenobita* and *C. vignai* unknown) . . . . . 2
- Female . . . . . 5
2. Median apophysis large, distinctly separated from embolic base; embolus thread originating at level of base of tegular sclerite (Figs. 21, 22) . . . . . *juglandicola*
- Median apophysis small, close to embolic base; embolus thread originating at level near middle of tegular sclerite (Figs. 9, 29) . . . . . 3
3. Conductor dorsal apophysis length subequal to conductor (Fig. 9) . . . . . *charitonovi*
- Conductor dorsal apophysis longer than conductor (Fig. 29) . . . . . 4
4. Conductor dorsal apophysis at least twice the size of conductor (Ovtchinnikov 1999:figs. 41, 42) . . . . . *nenilini*
- Conductor dorsal apophysis slightly larger than conductor (Fig. 29) . . . . . *turkestanicus*
5. Atrium situated at level of epigynal hoods (Fig. 26) or anterior of epigynal hoods (Figs. 7, 18) . . . . . 6
- Atrium situated at level posterior to epigynal hoods (Figs. 1, 4, 15, 34) . . . . . 9
6. Epigynal teeth contiguous (Fig. 26) . . . . . 7
- Epigynal teeth distinctly separated (Figs. 7, 18) . . . . . 8
7. Spermathecae abruptly converging, and then slightly diverging anteriorly (Fig. 27) . . . . . *turkestanicus*
- Spermathecae gradually converging (Ovtchinnikov 1999:figs. 43, 44) . . . . . *nenilini*
8. Epigynal teeth with bases separated by at least 3–4 times their width; atrium semi-circular; spermathecal heads extend toward the spermathecal bases (Figs. 18, 19) . . . . . *juglandicola*
- Epigynal teeth with bases separated by their width; atrium vase-shaped; spermathecal heads extend toward distal spermathecae (Figs. 7, 8) . . . . . *charitonovi*
9. Atrium with distinct anterior margin; epigynal teeth arising from a transversely extending furrow (Figs. 15, 34) . . . . . 10
- Atrium without anterior margin; epigynal teeth arising from a smooth surface (Figs. 1, 4) . . . . . 11
10. Atrium without distinct septum, with anteriorly protruding posterior margin (Figs. 15, 16) . . . . . *coenobita*
- Atrium with distinct septum (Figs. 34, 35) . . . . . *vignai*
11. Epigynal teeth relatively short, extend posteriorly less than halfway to epigastric furrow; spermathecae not convergent anteriorly (Figs. 1, 2) . . . . . *arganoi*
- Epigynal teeth relatively long, extend posteriorly more than halfway to epigastric furrow, spermathecae distinctly convergent anteriorly (Figs. 4, 5) . . . . . *caudatus*



Figures 4-6.—*Coelotes caudatus* de Blauwe 1973, female holotype from Lebanon. 4. Epigynum, ventral view. 5. Epigynum, dorsal view. 6. Eyes, view between front and dorsal.

*Coelotes arganoi* Brignoli 1978

Figs. 1-3, 37

*Coelotes arganoi* Brignoli 1978a:533, Figs. 132, 136 (female holotype, in MHNG, examined).

**Material examined.**—TURKEY: ♀ holotype, Erzincan, Sakaltutan gecidi, 12 June 1973, R. Argano, L. Boitani & V. Cottarelli (MHNG).

**Diagnosis.**—Females similar to *C. caudatus* in having anteriorly arising, basally contiguous, distally divergent epigynal teeth, distinct anterior margin of atrium, and broad spermathecae, but can be distinguished by relatively short epigynal teeth that extend less than halfway to epigastric furrow and spermathecae that extend parallel anteriorly (Figs. 1, 2).

**Description.**—See Brignoli (1978a) for more somatic descriptions.

**Female:** Medium-sized coelotine, total length 8.65. AME smallest, PME slightly larger than AME, lateral eyes subequal in size, slightly larger than PME; AME separated from each other by slightly less than their diameter, from ALE by about half an AME diameter; PME separated from each other by their diameter, from PLE by almost twice a PME diameter (Fig. 3). Chelicera with 3 promarginal and 3 retromarginal teeth. Epigynal teeth long, slender, arising from slightly anterior to atrium, with contiguous bases and widely separated apices; atrium large, wider than long, situated anteriorly, separated from epigastric furrow by more than its length, with distinct, continuous, arch-shaped anterior margin; copulatory ducts broad, originating anteriorly; spermathecae broad, slightly extended anteriorly, widely separated by about their width; spermathecal heads arising distally on spermathecae (Figs. 1, 2).

**Male:** Unknown.

**Distribution.**—Turkey (Fig. 37).

*Coelotes caudatus* de Blauwe 1973

Figs. 4-6, 37

*Coelotes caudatus* de Blauwe 1973:31, fig. 29 (female holotype, in MNHN, examined).—Brignoli 1978b:207, fig. 5.

**Material examined.**—LEBANON: ♀ holotype, Liban, E. Simon (MNHN B 2011, 1.037).

**Diagnosis.**—Females similar to *C. arganoi* in having the anteriorly arising, basally contiguous, distally divergent epigynal teeth, distinct anterior atrial margin, and broad spermathecae but can be distinguished by relatively long epigynal teeth that extend more than halfway to epigastric furrow and spermathecae that distinctly converge anteriorly (Figs. 4-5).

**Description.**—Described by de Blauwe (1973) but dorsal view of epigynum was neither illustrated nor described.

**Female:** Medium-sized coelotine, total length 8.70. Eyes subequal in size, or with ALE slightly larger; AME separated from each other by less than their diameter, from ALE by about AME diameter; PME separated from each other by about 1.5 times their diameter, from PLE by almost twice a PME diameter (Fig. 6). Chelicera with 3 promarginal and 3 retromarginal teeth. Epigynal teeth long, slender, arising anterior of anterior atrial margin, with slightly separated bases and widely separated apices; atrium large, wider than long, situated anteriorly, separated from epigastric furrow by its length, with distinct, continuous, arch-shaped anterior margin; copulatory ducts broad, originating anteriorly; spermathecae broad, with bases separated by their width, slightly extending and converging anteriorly; spermathecal heads arising distally on spermathecae (Figs. 4, 5).

**Male:** Unknown.

**Distribution.**—Turkey (Fig. 37).

*Coelotes charitonovi* Spassky 1939

Figs. 7-14, 37

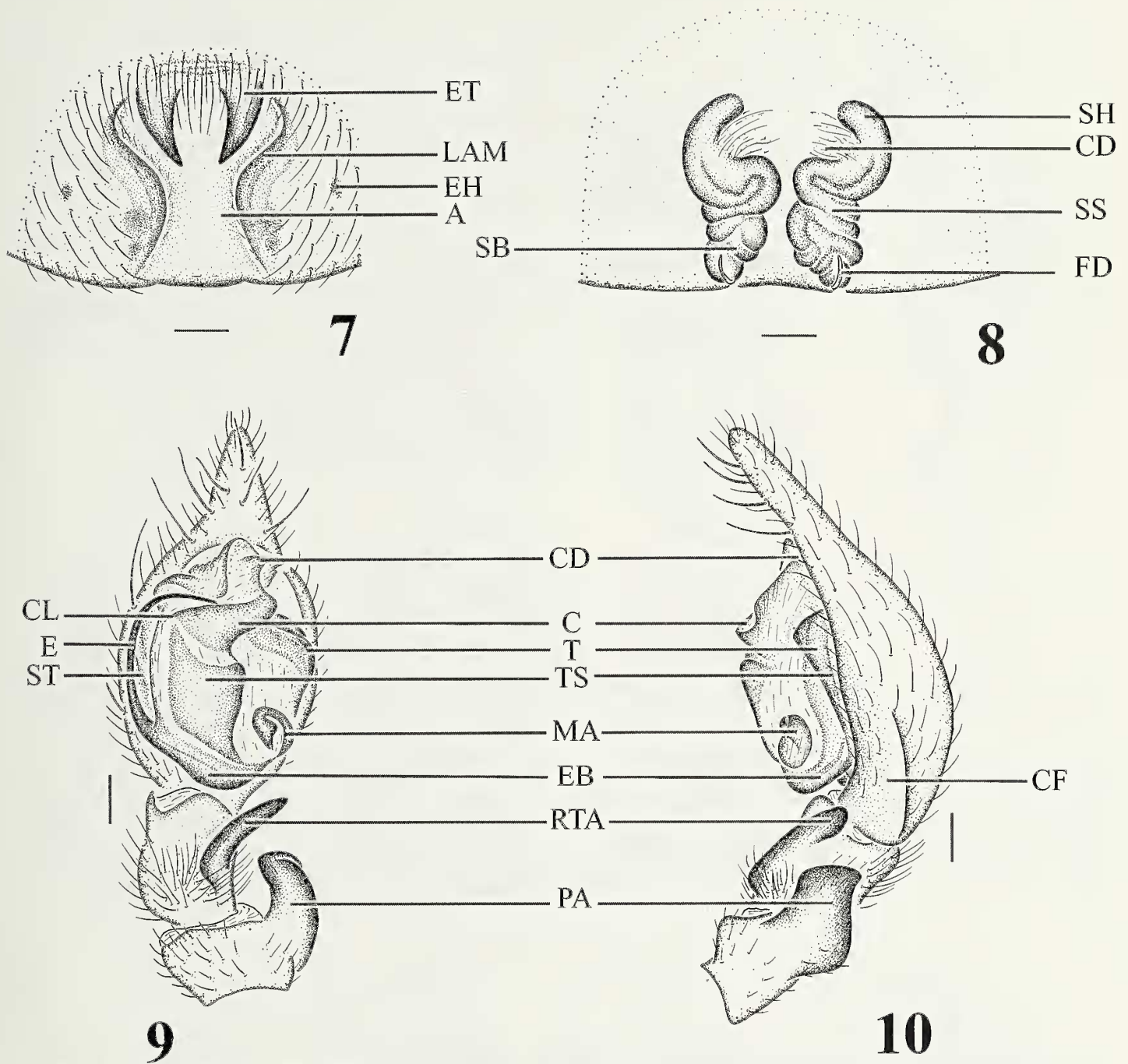
*Coelotes charitonovi* Spassky 1939:141, fig. 4 (types from Uzbekistan, depository unknown, not examined).—Ovtsharenko and Fet 1980:446; Ovtchinnikov 1999:74, figs. 34, 35; Wang 2002:48, figs. 113-126.

*Agelena bucharensis* Charitonov 1969:81, fig. 3.

*Coelotes bucharensis*: Ovtchinnikov 1988:141.

**Material examined.**—TAJIKISTAN: 1♀1♂, near Khovaling town, 1000 m, 7 November 1987, S. Ovtchinnikov (AMNH-donation of S. Ovtchinnikov).

**Diagnosis.**—This species is similar to *C. juglandicola* in having the distinctly separated epigynal teeth, but females can



Figures 7–10.—*Coelotes charitonovi* Spassky 1939, female and male from Khovaling town, Tadzhikistan. 7. Epigynum, ventral view. 8. Epigynum, dorsal view. 9. Palp, ventral view. 10. Palp, retrolateral view.

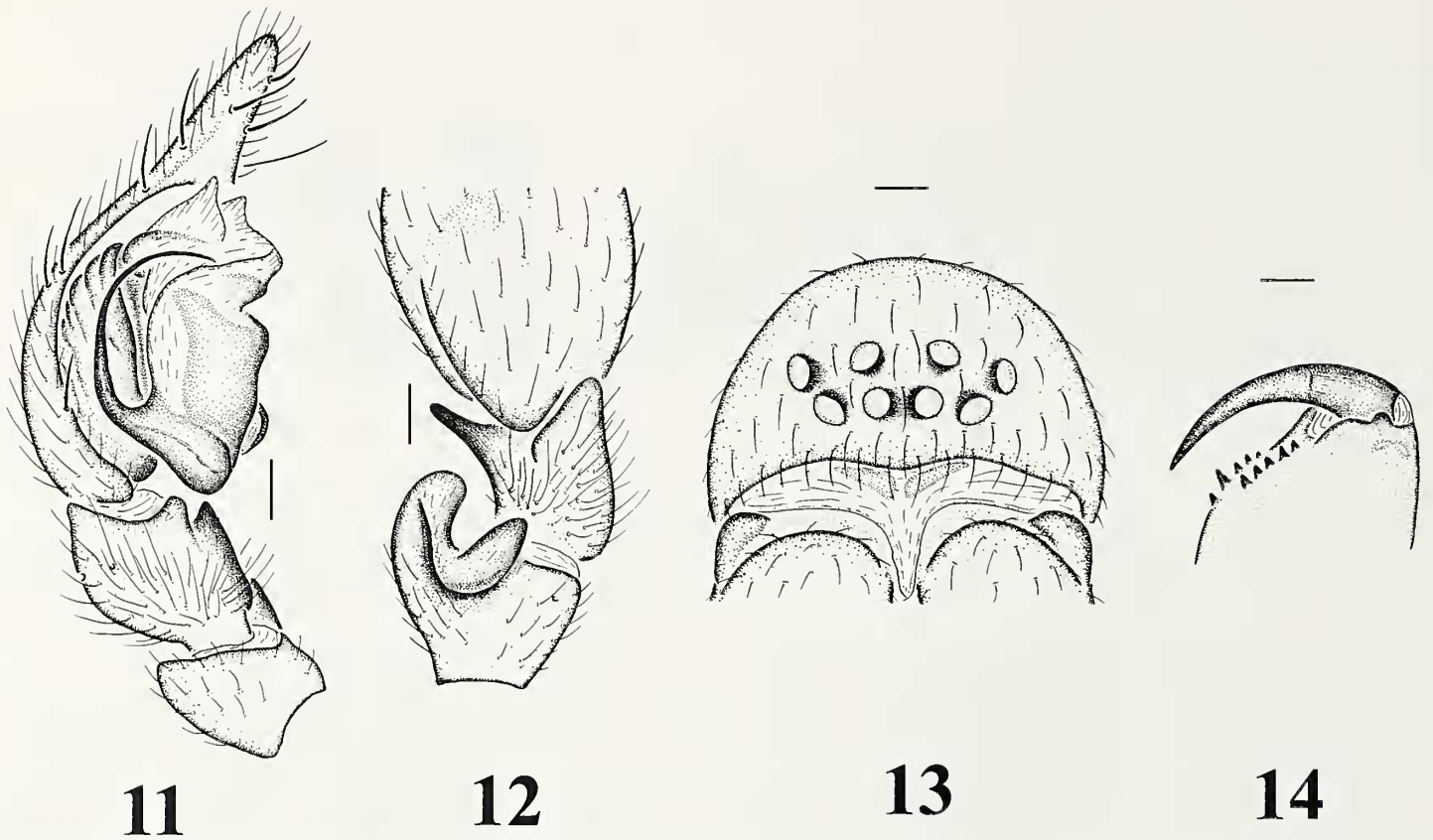
be distinguished by the closely situated epigynal teeth (separated by about their width) and the anteriorly extended spermathecal heads; males by the small conductor (about the size of the conductor dorsal apophysis) and the small, posteriorly situated median apophysis (Figs. 7–12).

**Description.**—Described by Spassky (1939) but the dorsal view of the epigynum was neither illustrated nor described.

**Female:** Medium-sized coelotine. ALE largest, other eyes subequal in size, slightly smaller than ALE; AME separated from each other by  $\frac{2}{3}$  of their diameter, from ALE by about half of AME diameter; posterior eyes equally separated by about 1.5 times PME diameter (Fig. 13). Chelicera with 5

promarginal and 5 retromarginal teeth. Epigynal teeth short, broad, arising from anterior atrial margin, slightly separated by their width; epigynal hoods situated medially; atrium situated anteriorly, with indistinct anterior margin and distinct, vase-shaped lateral margins that extend posteriorly to epigastric furrow; copulatory ducts small, originating anteriorly; spermathecae broad, extend anteriorly, slightly separated; spermathecal heads large, arising distally on spermathecae (Figs. 7, 8).

**Male:** Medium sized coelotine. Eyes and chelicerae similar to female. Patellar apophysis broad, dorsally concave; RTA more than half the tibial length, with distinctly extending



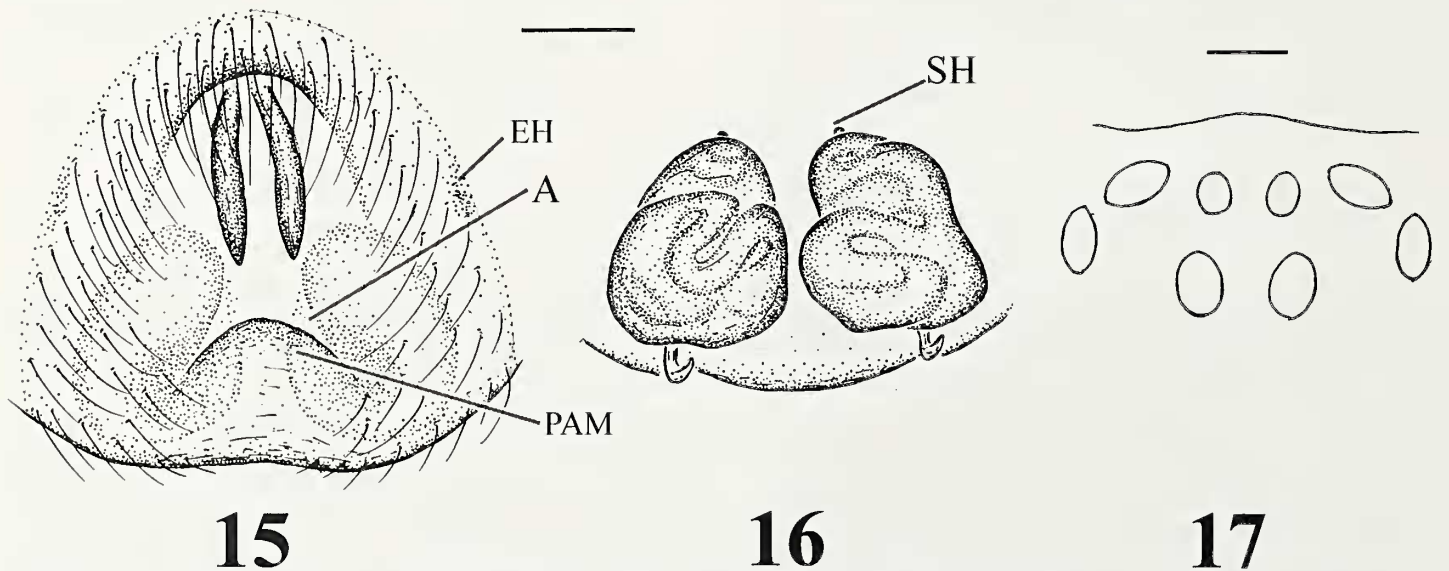
Figures 11–14.—*Coelotes charitonovi* Spassky 1939, female and male from Khovaling town, Tadzhikistan. 11, Palp, prolateral view. 12, Palp, retrolateral view. 13, Female, eyes, front view. 14, Female, chelicera, ventral view.

distal end; lateral tibial apophysis absent; cymbial furrow less than 1/3 of cymbial length; conductor short, basal lamella indistinct, dorsal apophysis about the same size as conductor; median apophysis small, spoon-shaped, without free standing anterior edge, arising posteriorly; embolus short, filiform, prolateral in origin, thread originating near middle of tegular sclerite (Figs. 9–12).

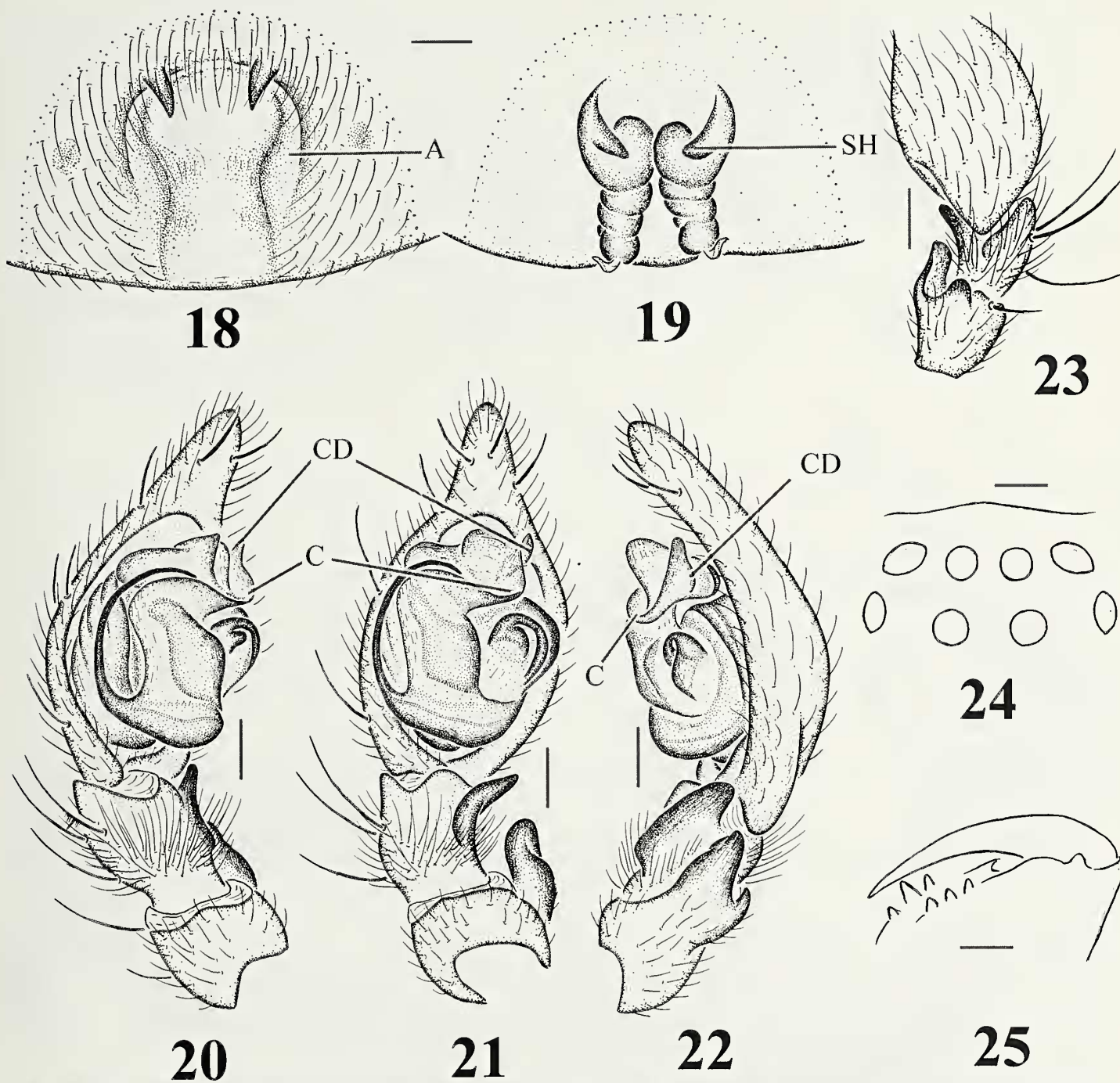
**Distribution.**—Tajikistan, Kyrgyzstan, Tajikistan, Turkmenistan, and Uzbekistan (Ovtchinnikov 1999) (Fig. 37).

*Coelotes coenobita* Brignoli 1978  
Figs. 15–17, 37

*Coelotes coenobita* Brignoli 1978a:533, figs. 135, 137 (female holotype and paratypes, in MHNG, examined).



Figures 15–17.—*Coelotes coenobita* Brignoli 1978, female holotype from Trabzon, Sumela (Macka), Turkey. 15, Epigynum, ventral view; 16, Epigynum, dorsal view; 17, eyes, view between front and dorsal.



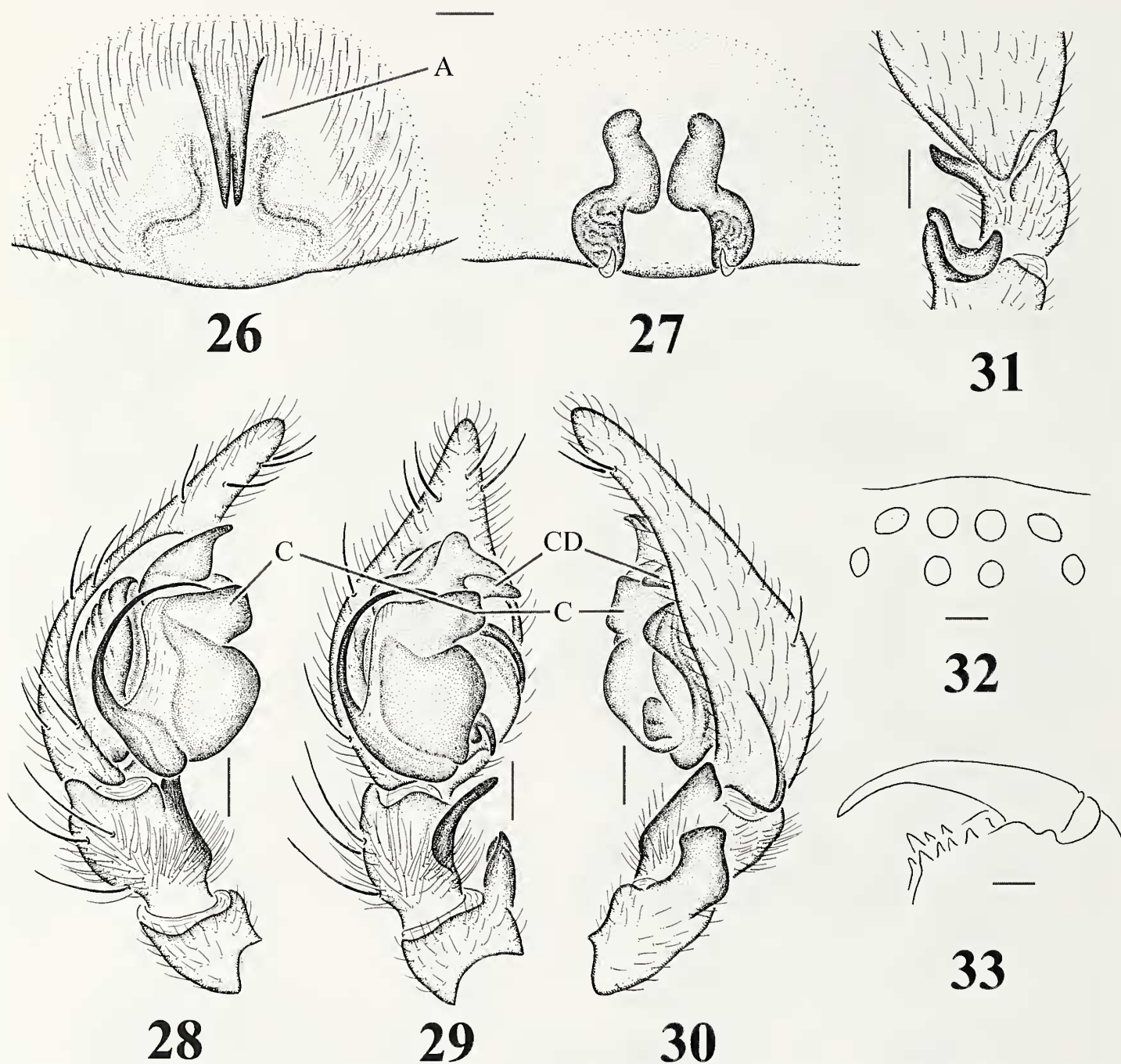
Figures 18–25.—*Coelotes juglandicola* Ovtchinnikov 1984, male and female from Fergansky Mt., Kyrgyzstan. 18. Epigynum, ventral view. 19. Epigynum, dorsal view. 20. Palp, prolateral view. 21. Palp, ventral view. 22, 23. Palp, retrolateral view. 24. Eyes, view between front and dorsal. 25. Chelicera, ventral view.

**Material examined.**—TURKEY: ♀ holotype, Trabzon, Sumela (Macka), June 16, 1968, P. Brignoli (MHNG); 2♀ paratypes, Trabzon, Sumela (Macka), 10–11 June 1969, P. Brignoli (MHNG).

**Diagnosis.**—Females are similar to *C. vignai* in having closely arising and extended epigynal teeth, posteriorly situated atrium, and broad, round spermathecae but can be distinguished by the absence of atrial septum, anteriorly extended posterior atrial margin, and slightly separated spermathecae (Figs. 15, 16).

**Description.**—See Brignoli (1978a) for more somatic descriptions.

*Female:* Medium-sized coelotine, total length 7.50. AME smallest, about half size of ALE, ALE largest, posterior eyes subequal in size, slightly smaller than ALE; AME separated from each other by about their diameter, from ALE by slightly less than AME diameter; PME separated from each other by less than their diameter, from PLE by more than a PME diameter (Fig. 17). Chelicera with 3 promarginal and 3 retromarginal teeth. Epigynal teeth long, slender, arising anteriorly from a



Figures 26–33.—*Coelotes turkestanicus* Ovtchinnikov 1999, male and female from Kizghizsky Mt., Kyrgyzstan. 26. Epigynum, ventral view. 27. Epigynum, dorsal view. 28. Palp, prolateral view. 29. Palp, ventral view. 30, 31. Palp, retrolateral view. 32. Eyes, view between front and dorsal; 33. Chelicera, ventral view.

transversely extending furrow, close together; atrium situated posteriorly, with distinct, anteriorly convexing posterior margin; copulatory ducts indistinct from dorsal view; spermathecae broad, round, close together; spermathecal heads arising distally on spermathecae, barely visible (Figs. 15, 16).

*Male*: Unknown.

**Distribution.**—Turkey (Fig. 37).

*Coelotes juglandicola* Ovtchinnikov 1984

Figs. 18–25, 37

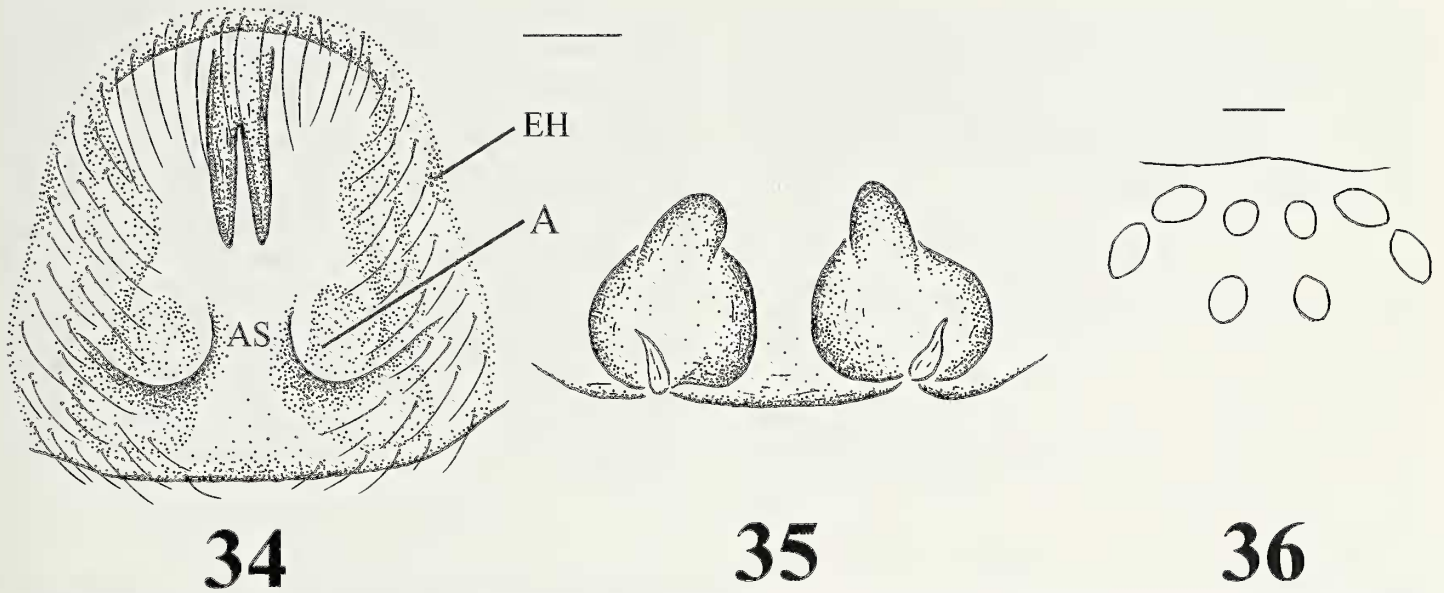
*Coelotes juglandicola* Ovtchinnikov 1984:126, figs. 1–2 (types not examined).

**Material examined.**—KYRGYZSTAN: 1♂1♀, Fergansky Mt., Baubashata Mts., Arslanbop, 17 July 1991, S. Ovtchinnikov (AMNH-donation of S. Ovtchinnikov).

**Diagnosis.**—Males can be recognized by embolus with thread originating near base of tegular sclerite, and females by widely separated epigynal teeth and posteriorly extended spermathecal heads (Figs. 18–23).

**Description.**—Described by Ovtchinnikov (1984) but the dorsal view of epigynum was neither illustrated nor described.

*Female*: Medium-sized coelotine. ALE largest, slightly larger than other eyes, which are subequal; anterior eyes equally separated by slightly more than half of AME diameter;



Figures 34–36.—*Coelotes vignai* Brignoli, 1978, female holotype from Bolu, Abant, Turkey. 34. Epigynum, ventral view. 35. Epigynum, dorsal view. 36. Eyes, view between front and dorsal.

PEM separated from each other by their diameter, from PLE by slightly less than 1.5 times PME diameter (Fig. 24). Chelicerae with 3 promarginal and 3 retromarginal teeth (Fig. 25). Epigynal teeth short, arising from anterior atrial margin, widely separated by about three times their width; epigynal hoods situated medially; atrium situated anteriorly, with continuous, arch-shaped anterior margin; copulatory ducts small, originating anteriorly; spermathecae broad,

extending and converging anteriorly, separated by their width at bases and contiguous at apices; spermathecal heads small, arising distally and extending toward spermathecal bases (Figs. 18, 19).

*Male:* Medium-sized coelotine. Eyes and chelicerae similar to female. Patellar apophysis broad, dorsally concave; RTA more than half length of tibia, with distinctly extended distal end; lateral tibial apophysis absent; cymbial furrow less than

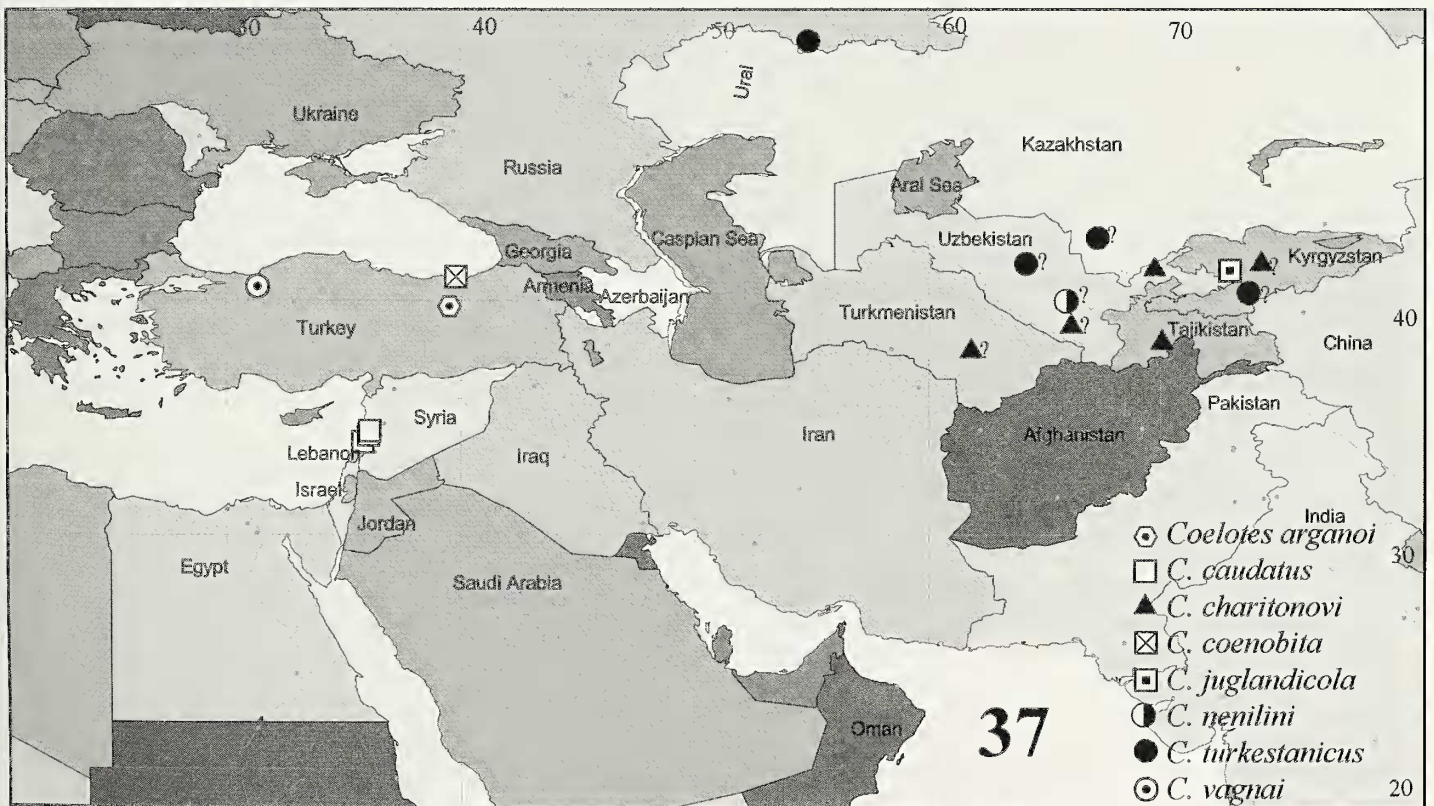


Figure 37.—Records of *charitonovi* group species (a question mark behind the symbol indicates the presence in the corresponding country, but without detailed locality).



1/3 of cymbial length; conductor short, basal lamella indistinct, dorsal apophysis about as large as conductor; median apophysis relatively large, spoon-shaped, without free standing anterior edge, distinctly separated from embolic base; embolus short, filiform, prolateral in origin, thread originating near base of tegular sclerite (Figs. 20–23).

**Distribution.**—Kyrgyzstan (Fig. 37).

*Coelotes nenilini* Ovtchinnikov 1999

Fig. 37

*Coelotes nenilini* Ovtchinnikov 1999:77, figs. 40–44 (types not examined).

**Material examined.**—None.

**Diagnosis.**—Similar to *C. turkestanicus* in having the long, contiguous epigynal teeth and the elongated spermathecae, but can be distinguished by the gradually convergent spermathecae in females and the large conductor dorsal apophysis in males.

**Description.**—Based on the illustrations of Ovtchinnikov (1999:figs. 41–44).

**Female:** Epigynal teeth long, contiguous, arising anteriorly; epigynal hoods situated medially; atrium reduced to slit; copulatory ducts indistinct; spermathecae extended and slightly convergent anteriorly, separated by about their width; spermathecal heads large, arising distally on spermathecae.

**Male:** Patellar apophysis broad, dorsally concave; RTA more than half length of tibia, with distinctly extended distal end; lateral tibial apophysis absent; cymbial furrow about 1/4 of cymbial length; conductor short, basal lamella indistinct, dorsal apophysis much larger than conductor; median apophysis small, spoon-shaped, without free standing anterior edge, situated close to embolic base; embolus short, filiform, prolateral in origin, thread originating near middle of tegular sclerite.

**Distribution.**—Uzbekistan (Ugamsky Mt. Range) (Fig. 37).

*Coelotes turkestanicus* Ovtchinnikov 1999

Figs. 26–33, 37

*Coelotes turkestanicus* Ovtchinnikov 1999:75, figs. 36–39 (male and female paratypes, in AMNH, examined). —Esyunin, Tuneva & Farzalieva 2007:53, figs. 14–16, 25.

**Material examined.**—KYRGYZSTAN: 1♂2♀ paratypes, Kizghizsky Mt. R., Malinovka Canyon, 1700 m, 21 October 1984, S. Ovtchinnikov (AMNH, donation of S. Ovtchinnikov).

**Diagnosis.**—Similar to *C. nenilini* in having the long, contiguous epigynal teeth and elongated spermathecae, but can be distinguished by abruptly convergent spermathecae in female and male conductor dorsal apophysis slightly larger than conductor (Figs. 26–31).

**Description.**—See Ovtchinnikov (1999) for more somatic descriptions.

**Female:** Large-sized coelotine, total length 12.60. Anterior eyes subequal in size or with ALE slightly larger, posterior eyes subequal, slightly smaller than anterior eyes; anterior eyes separated by about half an AME; PME separated from each other by about their diameter, from PLE by twice a PME diameter (Fig. 32). Chelicerae with 4 promarginal and 4 retromarginal teeth (Fig. 33). Epigynal teeth long, contiguous, arising anteriorly; epigynal hoods situated medially; atrium reduced to slit; copulatory ducts indistinct; spermathecae extending and abruptly converging anteriorly, separated by

more than their width at bases and slightly separated at apices; spermathecal heads large, arising distally on spermathecae (Figs. 26, 27).

**Male:** Large-sized coelotine, total length 10.00. Eyes and chelicerae same as in female. Patellar apophysis broad, dorsally concave; RTA more than half length of tibia, with distinctly extended distal end; lateral tibial apophysis absent; cymbial furrow about 1/4 of cymbial length; conductor short, basal lamella indistinct, dorsal apophysis slightly larger than conductor; median apophysis small, spoon-shaped, without free standing anterior edge, situated posteriorly, close to embolic base; embolus short, filiform, prolateral in origin, thread originating near middle of tegular sclerite (Figs. 28–31).

**Distribution.**—Kazakhstan, Kyrgyzstan, Uzbekistan, Russia (Fig. 37).

*Coelotes vignai* Brignoli 1978

Figs. 34–37

*Coelotes vignai* Brignoli, 1978a:535, fig. 133 (female holotype and paratypes, in MHNG, examined).

**Material examined.**—TURKEY: 1♀ holotype, 3♀ paratypes, Bolu, Abant, 12 July 1971, A. Vigna (MHNG); 2♀ paratypes, Bolu, Abant, 1400 m, 17 July 1971, P. Brignoli (Coll. Brignoli).

**Diagnosis.**—Females similar to *C. coenobita* in having closely arising and extended epigynal teeth, posteriorly situated atrium, and the broad, round spermathecae but can be distinguished by the presence of atrial septum and separated spermathecae (Figs. 34, 35).

**Description.**—See Brignoli (1978a) for more somatic descriptions.

**Female:** Medium-sized coelotine, total length 9.31. AME smallest, about half the size of ALE, ALE largest, PLE slightly smaller than ALE, PME slightly larger than AME; AME separated from each other by less than their diameter, from ALE by about half of AME diameter; PME separated from each other by about their diameter, from PLE by about 1.5–2 times a PME diameter (Fig. 36). Chelicera with 3 promarginal and 3 retromarginal teeth. Epigynal teeth long, slender, arising anteriorly, close together; atria situated posteriorly, with distinct septum; copulatory ducts indistinct from dorsal view; spermathecae broad, round, slightly separated; spermathecal heads large, arising distally on spermathecae (Figs. 34, 35).

**Male:** Unknown.

**Distribution.**—Turkey (Fig. 37).

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